

**ABSTRACT OF THE DISCLOSURE**

An improved insertion set is provided for transcutaneous placement of a sensor such as a glucose sensor at a selected site within the body of a patient. The insertion set comprises a mounting base defining an upwardly open channel for receiving and supporting a flexible thin film sensor, in combination with a cap assembled with said mounting base to capture and retain a proximal end of the sensor within said channel. The sensor further includes a distal segment with sensor electrodes thereon which protrudes from the mounting base for transcutaneous placement, wherein the sensor distal segment is slidably carried by a slotted insertion needle fitted through the assembled base and cap. Placement of the insertion set against the patient's skin causes the insertion needle to pierce the skin to carry the sensor electrodes to the desired subcutaneous site, after which the insertion needle can be slidably withdrawn from the insertion set. The mounting base further includes a fitting and related snap latch members for mated slide-fit releasable coupling of conductive contact pads on a proximal end of the sensor to a cable connector for transmitting sensor signals to a suitable monitoring device.